Title (en)

Cavity resonator for an electron spin resonance device.

Title (de)

Hohlraumresonator für eine Elektronenspinresonanz-Vorrichtung.

Title (fr)

Résonateur à cavité pour un appareil à résonance de spin électronique.

Publication

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Application

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Priority

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Abstract (en)

The invention provides a cavity resonator (10) for an electron spin resonance device in which modulation coils for generating a modulation magnetic field to be applied to a sample in the cavity resonator are arranged at an exterior of the cavity resonator. The cavity resonator (10)comprises a body being rectangular-defined by predetermined length, width and height. The body has a pair of side walls being vertical to the modulation magnetic field. The side wall respectively have at least thin portions (24, 26) of a thickness being nearly equal to or less than a skin depth of a skin effect appearing at the side walls. The modulation coils are arranged on the thin portions (24, 26) so as to have the modulation magnetic field be transmitted through the thin portions (24, 26) into the interior of the cavity resonator (10). Alternatively, it is possible that inner walls of the body are overlaid with metallic foils (34) having at least sufficiently smaller thickness than a skin depth of a skin effect appearing at the walls. <IMAGE>

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IPC 8 full level

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